

**CENTER FOR DRUG EVALUATION AND  
RESEARCH**

*APPLICATION NUMBER:*

**212154Orig1s000**

**PROPRIETARY NAME REVIEW(S)**

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**PROPRIETARY NAME MEMORANDUM**

Division of Medication Error Prevention and Analysis (DMEPA)  
Office of Medication Error Prevention and Risk Management (OMEPRM)  
Office of Surveillance and Epidemiology (OSE)  
Center for Drug Evaluation and Research (CDER)

**\*\*\* This document contains proprietary information that cannot be released to the public\*\*\***

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<b>Date of This Review:</b>	June 9, 2020
<b>Application Type and Number:</b>	NDA 212154
<b>Product Name and Strength:</b>	Viltepso (viltolarsen) injection, 50 mg/mL
<b>Total Product Strength:</b>	250 mg/5 mL
<b>Product Type:</b>	Single Ingredient Product
<b>Rx or OTC:</b>	Prescription (Rx)
<b>Applicant/Sponsor Name:</b>	Nippon Shinyaku Co., Ltd. (NS Pharma)
<b>Panorama #:</b>	2020-40415433
<b>DMEPA Primary Reviewer:</b>	Chad Morris, PharmD, MPH
<b>DMEPA Team Leader:</b>	Briana Rider, PharmD, CPPS

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## 1 INTRODUCTION

This memorandum is to reassess the proposed proprietary name, Viltepso, which was found unacceptable under NDA 212154 on January 6, 2020.<sup>a</sup> The proposed proprietary name, Viltepso, was found to be vulnerable to medication errors due to confusion with another product, (b) (4)\*\*\*, under review at the time. Therefore, the ultimate acceptability of the proposed proprietary name, Viltepso, was dependent upon which underlying application was approved first.

We note that the goal date for NDA 212154 is August 12, 2020, whereas the underlying application for (b) (4)\*\*\* remains in IND status. Therefore, if the proposed proprietary name, Viltepso, is granted approval under NDA 212154 on or before August 12, 2020, this application approval will precede approval of the application with the conflicting proposed name, (b) (4)\*\*\*.

Thus, NS Pharma resubmitted the proposed proprietary name, Viltepso, for review on June 4, 2020, and amended their submission on June 8, 2020.

## 2 METHODS AND DISCUSSION

### 2.1 SAFETY ASSESSMENT

For re-assessment of the proposed proprietary name, DMEPA evaluated the previously identified names of concern considering any lessons learned from recent post-marketing experience, which may have altered our previous conclusion regarding the acceptability of the proposed proprietary name. Additionally, DMEPA searched the USAN stem list to determine if the name contains any USAN stems as of the last USAN updates. The June 2, 2020 search of USAN stems did not find any USAN stems in the proposed proprietary name.

Finally, DMEPA evaluated the status of the underlying application of the conflicting name, (b) (4)\*\*\*, and determined that if NDA 212154 for Viltepso is approved on or before the August 12, 2020, this application approval will precede approval of the application with the conflicting proposed name, (b) (4)\*\*\* given the underlying application for (b) (4)\*\*\* remains in IND status.

Based upon our safety assessment of the proposed proprietary name, Viltepso, the application goal date for NDA 212154, and the status of the underlying application for (b) (4)\*\*\*, we find Viltepso conditionally acceptable.

### 2.2 COMMUNICATION OF DMEPA'S ANALYSIS

DMEPA communicated our findings to the Division of Neurology 1 via e-mail on June 5, 2020.

## 3 CONCLUSIONS

We conclude that the proposed proprietary name, Viltepso, is acceptable.

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<sup>a</sup> Weitzman, B. Proprietary Name Review for Viltepso (NDA 212154). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2020 JAN 06. Panorama No. 2019-35421770.

If you have any questions or need clarifications, please contact Casmir Ogbonna, OSE project manager, at 301-796-5272.

**3.1 COMMENTS TO NIPPON SHINYAKU CO., LTD.**

We have completed our review of the proposed proprietary name, Viltepsa, and have concluded that this name is acceptable.

If any of the proposed product characteristics as stated in your submission, received on June 4, 2020 and amended on June 8, 2020, are altered prior to approval of the marketing application, the name must be resubmitted for review.

If your application receives a complete response, please submit a new request for review of your proposed proprietary name when you respond to the application deficiencies.

#### **4 REFERENCES**

- 1. USAN Stems (<http://www.ama-assn.org/ama/pub/physician-resources/medical-science/united-states-adopted-names-council/naming-guidelines/approved-stems.page>)**

USAN Stems List contains all the recognized USAN stems.

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**This is a representation of an electronic record that was signed electronically. Following this are manifestations of any and all electronic signatures for this electronic record.**  
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/s/  
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JOHN C MORRIS  
06/09/2020 03:04:56 PM

BRIANA B RIDER  
06/09/2020 03:14:57 PM

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## PROPRIETARY NAME REVIEW

Division of Medication Error Prevention and Analysis (DMEPA)  
Office of Medication Error Prevention and Risk Management (OMEPRM)  
Office of Surveillance and Epidemiology (OSE)  
Center for Drug Evaluation and Research (CDER)

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<b>Date of This Review:</b>	January 6, 2020
<b>Application Type and Number:</b>	NDA 212154
<b>Product Name and Strength:</b>	Viltepso (viltolarsen) injection, 250 mg/5 mL (50 mg/mL)
<b>Total Product Strength:</b>	250 mg/5 mL
<b>Product Type:</b>	Single Ingredient Product
<b>Rx or OTC:</b>	Prescription (Rx)
<b>Applicant/Sponsor Name:</b>	Nippon Shinyaku Co., Ltd. (Nippon)
<b>Panorama #:</b>	2019-35421770
<b>DMEPA Safety Evaluator:</b>	Beverly Weitzman, PharmD
<b>DMEPA Team Leader:</b>	Briana Rider, PharmD, CPPS
<b>DMEPA Deputy Director:</b>	Danielle Harris, PharmD, BCPS

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## 1 INTRODUCTION

This review evaluates the proposed proprietary name, Viltepso, from a safety and misbranding perspective. The sources and methods used to evaluate the proposed proprietary name are outlined in the reference section and Appendix A respectively. Nippon submitted an external name study, conducted by [REDACTED] (b) (4) for this proposed proprietary name. We evaluated the data from this external name study in a previous review<sup>a</sup> of this proposed proprietary name (see Section 1.1 below).

### 1.1 REGULATORY HISTORY

Nippon previously submitted the proposed proprietary name, Viltepso on May 17, 2018. The name was found conditionally acceptable in OSE review # 2018-23121788 under IND 127474 dated October 29, 2018.<sup>a</sup>

Upon submission of NDA 212154, Nippon resubmitted the name, Viltepso, for reassessment on October 25, 2019.

### 1.2 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on October 25, 2019.

- Intended Pronunciation: vil tep' soe
- Active Ingredient: viltolarsen
- Indication of Use: Treatment of Duchenne Muscular Dystrophy (DMD) in patients who have a confirmed mutation of the DMD gene that is amenable to exon 53 skipping.
- Route of Administration: Intravenous infusion
- Dosage Form: injection
- Strength: 250 mg/5 mL (50 mg/mL)
- Dose and Frequency: 80 mg/kg once weekly
- How Supplied: single-dose vial containing 250 mg/5 mL (50 mg/mL)
- Storage: Store at 2°C to 8°C (36°F to 46°F). Do not freeze. [REDACTED] (b) (4)  
[REDACTED]
- Reference Listed Drug/Reference Product: N/A

## 2 RESULTS

The following sections provide information obtained and considered in the overall evaluation of the proposed proprietary name, Viltepso.

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<sup>a</sup> Morris, C. Proprietary Name Review for Viltepso (IND 127474). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2018 10 29. Panorama No. 2018-23121788.

## **2.1 MISBRANDING ASSESSMENT**

The Office of Prescription Drug Promotion (OPDP) determined that Viltepsso would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis (DMEPA) and the Division of Neurology Products (DNP) concurred with the findings of OPDP's assessment for Viltepsso.

## **2.2 SAFETY ASSESSMENT**

The following aspects were considered in the safety evaluation of the proposed proprietary name, Viltepsso.

### ***2.2.1 United States Adopted Names (USAN) Search***

There is no USAN stem present in the proposed proprietary name<sup>b</sup>.

### ***2.2.2 Components of the Proposed Proprietary Name***

Nippon indicated in their submission that the proposed proprietary name, Viltepsso, is composed of a prefix denoting the nonproprietary name, viltolarsen, combined with an infix connoting "steps", denoting the drug's "skipping" mechanism. This proprietary name is comprised of a single word that does not contain any components (i.e. a modifier, route of administration, dosage form, etc.) that are misleading or can contribute to medication error.

### ***2.2.3 Comments from Other Review Disciplines at Initial Review***

In response to the OSE, November 20, 2019 e-mail, the Division of Neurology Products (DNP) did not forward any comments or concerns relating to Viltepsso at the initial phase of the review.

### ***2.2.4 FDA Name Simulation Studies***

Seventy-one practitioners participated in DMEPA's prescription studies for Viltepsso. The responses did not overlap with any currently marketed products nor did the responses sound or look similar to any currently marketed products or any products in the pipeline. Appendix B contains the results from the verbal and written prescription studies.

### ***2.2.5 Phonetic and Orthographic Computer Analysis (POCA) Search Results***

Our POCA search<sup>c</sup> identified 108 names with the combined score of  $\geq 55\%$  or individual orthographic or phonetic score of  $\geq 70\%$ . We had identified and evaluated some of the names in our previous proprietary name review. We re-evaluated the previously identified names of concern considering any lessons learned from recent post-marketing experience, which may have altered our previous conclusion regarding the acceptability of the name. We note that none of the product characteristics have changed and we agree with the findings from our previous review for the names evaluated previously. Therefore, we identified 5 names not previously analyzed. These names are included in Table 1 below.

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<sup>b</sup> USAN stem search conducted on November 6, 2019.

<sup>c</sup> POCA search conducted on November 6, 2019 in version 4.3.

**2.2.6 Names Retrieved for Review Organized by Name Pair Similarity**

Table 1 lists the number of names retrieved from our POCA search. These name pairs are organized as highly similar, moderately similar or low similarity for further evaluation.

<b>Table 1. Names Retrieved for Review Organized by Name Pair Similarity</b>	
<b>Similarity Category</b>	<b>Number of Names</b>
Highly similar name pair: combined match percentage score $\geq 70\%$	1
Moderately similar name pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$	4
Low similarity name pair: combined match percentage score $\leq 54\%$	0

**2.2.7 Safety Analysis of Names with Potential Orthographic, Spelling, and Phonetic Similarities**

We determined 4 of the 5 names will not pose a risk for confusion with Viltepso as described in Appendices C through H. However, the proposed proprietary name could be confused with (b) (4)\*\*\*. The rationale for the risk of confusion is described below.

**Viltepso vs. (b) (4)\*\*\***

The proposed proprietary name, Viltepso, may be confused with another pending proposed proprietary name that is also under review, (b) (4), due to orthographic similarities and overlapping product characteristics. (b) (4)

(b) (4)

Orthographically, Viltepso and (b) (4)\*\*\* are similar (b) (4)

(b) (4)

(b) (4) these differences may not be sufficient to mitigate the risk of confusion. Postmarketing experience with other drug products demonstrates that name confusion can occur between similarly named drug products even when letters within the prefix and suffix differ, as seen in cases of confusion between Cerebyx, Celebrex, and Celexa.<sup>d,e</sup>

<sup>d</sup> Institute for Safe Medication Practices. 2000 JUN 14. Safety Briefs. ISMP Med Saf Alert. 5(12):1.

<sup>e</sup> Institute for Safe Medication Practices. 1999 MAY 05. Safety Briefs. ISMP Med Saf Alert. 4(9):1.

The similarity of this name pair is further supported by FDA’s Phonetic and Orthographic Computer Analysis (POCA) program<sup>f</sup>, which calculates a combined orthographic and phonetic score of 70%, suggesting that there is high similarity between these names.

In addition to the orthographic similarities, Viltepso and (b) (4)\*\*\* share overlapping product characteristics, which further increases the potential for wrong drug errors. (b) (4)

We acknowledge that the products have different indications (Duchenne Muscular Dystrophy vs. (b) (4)). However, we are concerned that this difference in indication may not prevent confusion between this name pair, given the orthographic similarities and overlapping product characteristics of the names. Despite widespread recommendations only a small percentage of medications ordered include the indication.<sup>g</sup>

Furthermore, we acknowledge that Viltepso and (b) (4)\*\*\* differ in strength 250 mg/5 mL (50 mg/mL) vs. (b) (4). Although the product strengths differ for Viltepso and (b) (4)\*\*\*, postmarketing evidence suggest that the strength may be omitted if the product is only available as a single strength.<sup>h</sup> Therefore, the strength may not be included on a prescription to help differentiate the products. We are aware of postmarketing reports of errors involving confusion between similarly named drug products, even when the strengths differ, which further support the potential for confusion with this name pair. The potential for such confusion is supported by a report from the Institute for Safe Medication Practices (ISMP) which documents name confusion between injectable products Narcan (naloxone hydrochloride) and Norcuron (vecuronium) despite their differences in strength (0.4 mg/mL, 0.02 mg/mL, and 1 mg/mL versus 10 mg/vial and 20 mg/vial).<sup>i</sup>

We acknowledge that our conclusion differs from the (b) (4) external study submitted in support of the proposed proprietary name. However, the pending proprietary name, (b) (4)\*\*\*, is also under review and thus it was not identified by the (b) (4) external study.

We note that this decision differs from our previous decision regarding the acceptability of the proposed proprietary name, Viltepso. However, when Viltepso was previously evaluated, the proposed proprietary name, (b) (4)\*\*\*, was not yet submitted for review by the Agency.

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<sup>f</sup> POCA search conducted on November 6, 2019 in version 4.3.

<sup>g</sup> Schiff GD, Mirica MM, Dhavle AA, Galanter WL, Lambert B, Wright A. A Prescription for Enhancing Electronic Prescribing Safety. *Health Affairs* 2018; 37(11): 1877-1883.

<sup>h</sup> Institute for Safe Medication Practices. Safety briefs: Vitamin D-angerous? *ISMP Med Saf Alert Community/Ambulatory Care*. 2012; 11(11): 1-4.

<sup>i</sup> Institute for Safe Medication Practices. 1998 OCT 07. A caution about NARCAN – NORCURON confusion. *ISMP Med Saf Alert*. 3(20):1.

Therefore, based on the totality of the information above, we find the proposed proprietary name, Viltepsa, vulnerable to medication errors due to name confusion with (b) (4)\*\*\*.

### **2.2.8 Communication of DMEPA's Analysis at Midpoint of Review**

DMEPA communicated our findings to the Division of Neurology Products (DNP) via e-mail on December 17, 2019. At that time, we also requested additional information or concerns that could inform our review. Per e-mail correspondence from the Division of Neurology Products (DNP) on December 17, 2019, they stated no additional concerns with the proposed proprietary name, Viltepsa.

## **3 CONCLUSION**

The proposed proprietary name, Viltepsa, is not acceptable from a safety perspective. The proposed proprietary name, Viltepsa, is vulnerable to name confusion with another proposed pending proprietary name. Therefore, the decision to deny the name will be communicated to Nippon via letter (See Section 3.1).

If you have further questions or need clarifications, please contact Casmir Ogbonna, OSE project manager, at 301-796-5272.

### **3.1 COMMENTS TO NIPPON SHINYAKU CO., LTD.**

We have completed our review of the proposed proprietary name, Viltepsa, and have concluded that this name could result in medication errors due to confusion with another product that is also under review. Therefore, the ultimate acceptability of your proposed proprietary name, Viltepsa, is dependent upon which underlying application is approved first. If another product is approved prior to your product, with a name that would be confused with your proposed name Viltepsa, you will be requested to submit another name.

We note that this decision differs from our previous decision regarding the acceptability of the proposed proprietary name, Viltepsa. However, when Viltepsa was previously evaluated, the conflicting pending proposed proprietary name was not yet submitted for review by the Agency.

We acknowledge that our conclusion differs from that of the (b) (4) external study submitted in support of the proposed proprietary name. However, the pending proprietary name is also under review and thus was not identified by the (b) (4) external study.

## 4 REFERENCES

### 1. USAN Stems (<https://www.ama-assn.org/about/united-states-adopted-names-approved-stems>)

USAN Stems List contains all the recognized USAN stems.

### 2. *Phonetic and Orthographic Computer Analysis (POCA)*

POCA is a system that FDA designed. As part of the name similarity assessment, POCA is used to evaluate proposed names via a phonetic and orthographic algorithm. The proposed proprietary name is converted into its phonemic representation before it runs through the phonetic algorithm. Likewise, an orthographic algorithm exists that operates in a similar fashion. POCA is publicly accessible.

### *Drugs@FDA*

Drugs@FDA is an FDA Web site that contains most of the drug products approved in the United States since 1939. The majority of labels, approval letters, reviews, and other information are available for drug products approved from 1998 to the present. Drugs@FDA contains official information about FDA-approved *brand name* and *generic drugs*; *therapeutic biological products*, *prescription* and *over-the-counter* human drugs; and *discontinued drugs* (see Drugs @ FDA Glossary of Terms, available at [http://www.fda.gov/Drugs/InformationOnDrugs/ucm079436.htm#ther\\_biological](http://www.fda.gov/Drugs/InformationOnDrugs/ucm079436.htm#ther_biological)).

### *RxNorm*

RxNorm contains the names of prescription and many OTC drugs available in the United States. RxNorm includes generic and branded:

- Clinical drugs – pharmaceutical products given to (or taken by) a patient with therapeutic or diagnostic intent
- Drug packs – packs that contain multiple drugs, or drugs designed to be administered in a specified sequence

Radiopharmaceuticals, contrast media, food, dietary supplements, and medical devices, such as bandages and crutches, are all out of scope for RxNorm

(<http://www.nlm.nih.gov/research/umls/rxnorm/overview.html>).

### *Division of Medication Errors Prevention and Analysis proprietary name consultation requests*

This is a list of proposed and pending names that is generated by the Division of Medication Error Prevention and Analysis from the Access database/tracking system.

## APPENDICES

### Appendix A

FDA's Proprietary Name Risk Assessment evaluates proposed proprietary names for misbranding and safety concerns.

1. **Misbranding Assessment:** For prescription drug products, OPDP assesses the name for misbranding concerns. For over-the-counter (OTC) drug products, the misbranding assessment of the proposed name is conducted by DNDP. OPDP or DNDP evaluates proposed proprietary names to determine if the name is false or misleading, such as by making misrepresentations with respect to safety or efficacy. For example, a fanciful proprietary name may misbrand a product by suggesting that it has some unique effectiveness or composition when it does not (21 CFR 201.10(c)(3)). OPDP or DNDP provides their opinion to DMEPA for consideration in the overall acceptability of the proposed proprietary name.
2. **Safety Assessment:** The safety assessment is conducted by DMEPA, and includes the following:
  - a. **Preliminary Assessment:** We consider inclusion of USAN stems or other characteristics that when incorporated into a proprietary name may cause or contribute to medication errors (i.e., dosing interval, dosage form/route of administration, medical or product name abbreviations, names that include or suggest the composition of the drug product, etc.) See prescreening checklist below in Table 2\*. DMEPA defines a medication error as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer.<sup>j</sup>

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<sup>j</sup> National Coordinating Council for Medication Error Reporting and Prevention.  
<http://www.nccmerp.org/aboutMedErrors.html>. Last accessed 10/11/2007.

**\*Table 2- Prescreening Checklist for Proposed Proprietary Name**

	Answer the questions in the checklist below. Affirmative answers to any of these questions indicate a potential area of concern that should be carefully evaluated as described in this guidance.
<b>Y/N</b>	<b>Is the proposed name obviously similar in spelling and pronunciation to other names?</b>
	Proprietary names should not be similar in spelling or pronunciation to proprietary names, established names, or ingredients of other products.
<b>Y/N</b>	<b>Are there inert or inactive ingredients referenced in the proprietary name?</b>
	Proprietary names should not incorporate any reference to an inert or inactive ingredient in a way that might create an impression that the ingredient's value is greater than its true functional role in the formulation (21 CFR 201.10(c)(4)).
<b>Y/N</b>	<b>Does the proprietary name include combinations of active ingredients?</b>
	Proprietary names of fixed combination drug products should not include or suggest the name of one or more, but not all, of its active ingredients (see 21 CFR 201.6(b)).
<b>Y/N</b>	<b>Is there a United States Adopted Name (USAN) stem in the proprietary name?</b>
	Proprietary names should not incorporate a USAN stem in the position that USAN designates for the stem.
<b>Y/N</b>	<b>Is this proprietary name used for another product that does not share at least one common active ingredient?</b>
	Drug products that do not contain at least one common active ingredient should not use the same (root) proprietary name.
<b>Y/N</b>	<b>Is this a proprietary name of a discontinued product?</b>
	Proprietary names should not use the proprietary name of a discontinued product if that discontinued drug product does not contain the same active ingredients.

- b. Phonetic and Orthographic Computer Analysis (POCA): Following the preliminary screening of the proposed proprietary name, DMEPA staff evaluates the proposed name against potentially similar names. In order to identify names with potential similarity to the proposed proprietary name, DMEPA enters the proposed proprietary name in POCA and queries the name against the following drug reference databases, Drugs@fda, CernerRxNorm, and names in the review pipeline using a 55% threshold in POCA. DMEPA reviews the combined orthographic and phonetic matches and group the names into one of the following three categories:
- Highly similar pair: combined match percentage score  $\geq 70\%$ .
  - Moderately similar pair: combined match percentage score  $\geq 55\%$  to  $\leq 69\%$ .

- Low similarity: combined match percentage score  $\leq 54\%$ .

Using the criteria outlined in the check list (Table 3-5) that corresponds to each of the three categories (highly similar pair, moderately similar pair, and low similarity), DMEPA evaluates the name pairs to determine the acceptability or non-acceptability of a proposed proprietary name. The intent of these checklists is to increase the transparency and predictability of the safety determination of whether a proposed name is vulnerable to confusion from a look-alike or sound-alike perspective. Each bullet below corresponds to the name similarity category cross-references the respective table that addresses criteria that DMEPA uses to determine whether a name presents a safety concern from a look-alike or sound-alike perspective.

- For highly similar names, differences in product characteristics often cannot mitigate the risk of a medication error, including product differences such as strength and dose. Thus, proposed proprietary names that have a combined score of  $\geq 70$  percent are at risk for a look-alike sound-alike confusion which is an area of concern (See Table 3).
- Moderately similar names are further evaluated to identify the presence of attributes that are known to cause name confusion.
  - Name attributes: We note that the beginning of the drug name plays a significant role in contributing to confusion. Additionally, drug name pairs that start with the same first letter and contain a shared letter string of at least 3 letters in both names are major contributing factor in the confusion of drug names<sup>k</sup>. We evaluate all moderately similar names retrieved from POCA to identify the above attributes. These names are further evaluated to identify overlapping or similar strengths or doses.
  - Product attributes: Moderately similar names of products that have overlapping or similar strengths or doses represent an area for concern for FDA. The dose and strength information is often located in close proximity to the drug name itself on prescriptions and medication orders, and the information can be an important factor that either increases or decreases the potential for confusion between similarly named drug pairs. The ability of other product characteristics to mitigate confusion (e.g., route, frequency, dosage form) may be limited when the strength or dose overlaps. DMEPA reviews such names further, to determine whether sufficient differences exist to prevent confusion. (See Table 4).
- Names with low similarity that have no overlap or similarity in strength and dose are generally acceptable (See Table 5) unless there are data to suggest that the name might be vulnerable to confusion (e.g., prescription simulation study suggests that the name is likely to be misinterpreted as a marketed product). In these instances, we would reassign

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<sup>k</sup> Shah, M, Merchant, L, Characteristics That May Help in the Identification of Potentially Confusing Proprietary Drug Names. Therapeutic Innovation & Regulatory Science, September 2016

a low similarity name to the moderate similarity category and review according to the moderately similar name pair checklist.

- c. FDA Prescription Simulation Studies: DMEPA staff also conducts a prescription simulation studies using FDA health care professionals.

Three separate studies are conducted within the Centers of the FDA for the proposed proprietary name to determine the degree of confusion of the proposed proprietary name with marketed U.S. drug names (proprietary and established) due to similarity in visual appearance with handwritten prescriptions or verbal pronunciation of the drug name. The studies employ healthcare professionals (pharmacists, physicians, and nurses), and attempts to simulate the prescription ordering process. The primary Safety Evaluator uses the results to identify orthographic or phonetic vulnerability of the proposed name to be misinterpreted by healthcare practitioners.

In order to evaluate the potential for misinterpretation of the proposed proprietary name in handwriting and verbal communication of the name, inpatient medication orders and/or outpatient prescriptions are written, each consisting of a combination of marketed and unapproved drug products, including the proposed name. These orders are optically scanned and one prescription is delivered to a random sample of participating health professionals via e-mail. In addition, a verbal prescription is recorded on voice mail. The voice mail messages are then sent to a random sample of the participating health professionals for their interpretations and review. After receiving either the written or verbal prescription orders, the participants record their interpretations of the orders which are recorded electronically.

- d. Comments from Other Review Disciplines: DMEPA requests the Office of New Drugs (OND) and/or Office of Generic Drugs (OGD), ONDQA or OBP for their comments or concerns with the proposed proprietary name, ask for any clinical issues that may impact the DMEPA review during the initial phase of the name review. Additionally, when applicable, at the same time DMEPA requests concurrence/non-concurrence with OPDP's decision on the name. The primary Safety Evaluator addresses any comments or concerns in the safety evaluator's assessment.

The OND/OGD Regulatory Division is contacted a second time following our analysis of the proposed proprietary name. At this point, DMEPA conveys their decision to accept or reject the name. The OND or OGD Regulatory Division is requested to provide any further information that might inform DMEPA's final decision on the proposed name.

Additionally, other review disciplines opinions such as ONDQA or OBP may be considered depending on the proposed proprietary name.

When provided, DMEPA considers external proprietary name studies conducted by or for the Applicant/Sponsor and incorporates the findings of these studies into the overall risk assessment.

The DMEPA primary reviewer assigned to evaluate the proposed proprietary name is responsible for considering the collective findings, and provides an overall risk assessment of the proposed proprietary name.

**Table 3. Highly Similar Name Pair Checklist (i.e., combined Orthographic and Phonetic score is  $\geq 70\%$ ).**

Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may render the names less likely to confusion, provided that the pair does not share a common strength or dose.			
<u>Orthographic Checklist</u>		<u>Phonetic Checklist</u>	
<b>Y/N</b>	Do the names begin with different first letters?  <i>Note that even when names begin with different first letters, certain letters may be confused with each other when scripted.</i>	<b>Y/N</b>	Do the names have different number of syllables?
<b>Y/N</b>	Are the lengths of the names dissimilar* when scripted?  <i>*FDA considers the length of names different if the names differ by two or more letters.</i>	<b>Y/N</b>	Do the names have different syllabic stresses?
<b>Y/N</b>	Considering variations in scripting of some letters (such as z and f), is there a different number or placement of upstroke/downstroke letters present in the names?	<b>Y/N</b>	Do the syllables have different phonologic processes, such as vowel reduction, assimilation, or deletion?
<b>Y/N</b>	Is there different number or placement of cross-stroke or dotted letters present in the names?	<b>Y/N</b>	Across a range of dialects, are the names consistently pronounced differently?
<b>Y/N</b>	Do the infixes of the name appear dissimilar when scripted?		
<b>Y/N</b>	Do the suffixes of the names appear dissimilar when scripted?		

**Table 4: Moderately Similar Name Pair Checklist (i.e., combined score is  $\geq 55\%$  to  $\leq 69\%$ ).**

Step 1	<p>Review the DOSAGE AND ADMINISTRATION and HOW SUPPLIED/STORAGE AND HANDLING sections of the prescribing information (or for OTC drugs refer to the Drug Facts label) to determine if strengths and doses of the name pair overlap or are very similar. Different strengths and doses for products whose names are moderately similar may decrease the risk of confusion between the moderately similar name pairs. Name pairs that have overlapping or similar strengths or doses have a higher potential for confusion and should be evaluated further (see Step 2). Because the strength or dose could be used to express an order or prescription for a particular drug product, overlap in one or both of these components would be reason for further evaluation.</p> <p>For single strength products, also consider circumstances where the strength may not be expressed.</p> <p>For any i.e. drug products comprised of more than one active ingredient, consider whether the strength or dose may be expressed using only one of the components.</p> <p>To determine whether the strengths or doses are similar to your proposed product, consider the following list of factors that may increase confusion:</p> <ul style="list-style-type: none"><li>• Alternative expressions of dose: 5 mL may be listed in the prescribing information, but the dose may be expressed in metric weight (e.g., 500 mg) or in non-metric units (e.g., 1 tsp, 1 tablet/capsule). Similarly, a strength or dose of 1000 mg may be expressed, in practice, as 1 g, or vice versa.</li><li>• Trailing or deleting zeros: 10 mg is similar in appearance to 100 mg which may potentiate confusion between a name pair with moderate similarity.</li><li>• Similar sounding doses: 15 mg is similar in sound to 50 mg</li></ul>
Step 2	<p>Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may reduce the likelihood of confusion for moderately similar names <b>with</b> overlapping or similar strengths or doses.</p>

	<p>Orthographic Checklist (Y/N to each question)</p> <ul style="list-style-type: none"> <li>• Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted.</li> <li>• Are the lengths of the names dissimilar* when scripted? *FDA considers the length of names different if the names differ by two or more letters.</li> <li>• Considering variations in scripting of some letters (such as <i>z</i> and <i>f</i>), is there a different number or placement of upstroke/downstroke letters present in the names?</li> <li>• Is there different number or placement of cross-stroke or dotted letters present in the names?</li> <li>• Do the infixes of the name appear dissimilar when scripted?</li> <li>• Do the suffixes of the names appear dissimilar when scripted?</li> </ul>	<p>Phonetic Checklist (Y/N to each question)</p> <ul style="list-style-type: none"> <li>• Do the names have different number of syllables?</li> <li>• Do the names have different syllabic stresses?</li> <li>• Do the syllables have different phonologic processes, such as vowel reduction, assimilation, or deletion?</li> <li>• Across a range of dialects, are the names consistently pronounced differently?</li> </ul>
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**Table 5: Low Similarity Name Pair Checklist (i.e., combined score is ≤54%).**

Names with low similarity are generally acceptable unless there are data to suggest that the name might be vulnerable to confusion (e.g., prescription simulation study suggests that the name is likely to be misinterpreted as a marketed product). In these instances, we would reassign a low similarity name to the moderate similarity category and review according to the moderately similar name pair checklist.

**Appendix B: Prescription Simulation Samples and Results**

**Figure 1. Viltepsa Study (Conducted on November 11, 2019)**

Handwritten Medication Order/Prescription	Verbal Prescription
<p>Medication Order:</p> <p><i>Viltepsa 80mg/kg IV infusion over weekly</i></p>	<p>Viltepsa Bring to clinic #1</p>
<p>Outpatient Prescription:</p> <div data-bbox="194 604 1039 1113" style="border: 1px solid black; padding: 5px;"> <p>Patient _____ Date _____</p> <p>Address _____</p> <p><b>Rx</b> <i>Viltepsa bring to clinic #1</i></p>  <p>Refill(s): _____ Dr. <i>ase</i> _____</p> <p>DEA No. _____ Address _____</p> <p>Telephone _____</p> </div>	

**FDA Prescription Simulation Responses (Aggregate Report)**

Study Name: Viltepsa					212 People Received Study 71 People Responded
<b>Total</b>	<b>16</b>	<b>17</b>	<b>38</b>	<b>71</b>	
INTERPRETATION	OUTPATIENT	VOICE	INPATIENT	TOTAL	
VELTIPSO	0	1	0	1	
VILTEPO	0	0	1	1	
VILTEPRO	0	0	3	3	
VILTEPSA	0	0	1	1	

VILTEPSO	16	13	33	62
VILTEPZO	0	2	0	2
ZILTEPSO	0	1	0	1

**Appendix C:** Highly Similar Names (e.g., combined POCA score is  $\geq 70\%$ )

No.	Proposed name: Viltepso Established name: viltolarsen Dosage form: injection Strength(s): 250 mg/5 mL (50 mg/mL) Usual Dose: 80 mg/kg weekly	POCA Score (%)	Orthographic and/or phonetic differences in the names sufficient to prevent confusion  Other prevention of failure mode expected to minimize the risk of confusion between these two names.
	N/A		

**Appendix D:** Moderately Similar Names (e.g., combined POCA score is  $\geq 55\%$  to  $\leq 69\%$ ) with no overlap or numerical similarity in Strength and/or Dose

No.	Name	POCA Score (%)
	N/A	

**Appendix E:** Moderately Similar Names (e.g., combined POCA score is  $\geq 55\%$  to  $\leq 69\%$ ) with overlap or numerical similarity in Strength and/or Dose

No.	Proposed name: Viltepso Established name: viltolarsen Dosage form: injection Strength(s): 250 mg/5 mL (50 mg/mL) Usual Dose: 80 mg/kg weekly	POCA Score (%)	Prevention of Failure Mode  In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names
1.	Vitastem	58	This name pair has sufficient orthographic and phonetic differences.
2.	Vyleesi	56	This name pair has sufficient orthographic and phonetic differences.

**Appendix F:** Low Similarity Names (e.g., combined POCA score is  $\leq 54\%$ )

No.	Name	POCA Score (%)
	N/A	

**Appendix G:** Names not likely to be confused or not used in usual practice settings for the reasons described.

No.	Name	POCA Score (%)	Failure preventions
3.	(b) (4)***	58	Proposed proprietary name, (b) (4)*** for IND (b) (4) found unacceptable by DMEPA (OSE# (b) (4)). The Sponsor subsequently submitted the proposed proprietary name, (b) (4)*** and the new name was found to be conditionally acceptable on (b) (4)

**Appendix H:** Names not likely to be confused due to absence of attributes that are known to cause name confusion<sup>1</sup>.

No.	Name	POCA Score (%)
4.	(b) (4)***	57

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<sup>1</sup> Shah, M, Merchant, L, Chan, I, and Taylor, K. Characteristics That May Help in the Identification of Potentially Confusing Proprietary Drug Names. Therapeutic Innovation & Regulatory Science, September 2016

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**This is a representation of an electronic record that was signed electronically. Following this are manifestations of any and all electronic signatures for this electronic record.**

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/s/  
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01/06/2020 02:32:15 PM

BRIANA B RIDER  
01/06/2020 03:02:57 PM

DANIELLE M HARRIS  
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